

عنوان مقاله:

Effects of tagging with stable isotope of barium on growth and barium concentration in muscle in Persian sturgeon
(*Acipenser persicus*)

محل انتشار:

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خلاصه مقاله:

Now a day stable isotopes technique is applied for tagging of fish. In this study, the effectiveness of tagging Persian sturgeon (*Acipenser persicus*) juvenile's pectoral fin spine by a stable barium isotope was evaluated. Fish were reared in water exposed to 0 (control), 30, 60 or 90 $\mu\text{g L}^{-1}$ ^{137}Ba for 1, 3 and 5 days. Specimens of each treatment were kept for 14 days post-labelling to assess effects of this technique on fish growth and its health. The concentration of ^{137}Ba were analyzed by ICP-OES. Isotope marks in the pectoral fin spines were found at the first day of tagging. Barium levels in muscle were less than allowed limit for daily consumption of this element ($P < 0.05$). Concentrations of barium in muscle were significantly different than that of water ($P < 0.05$). The length and weight of Persian sturgeon during the experimental period showed that isotope immersion did not negatively affect early growth. Enriched stable isotopes can therefore be used at low dosages to mark of fishes, without adverse effects on the health of the fishes or on humans who may consume them.

کلمات کلیدی:

Stable isotopes, Marking, Pectoral fin spine, ICP-OES

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